



LETTER TO THE EDITOR

Identical Reared apart Twins Concordant for Transsexuality



A growing twin-based literature supports genetic influence on gender identity development.¹ An international survey of adult transsexual twin pairs reported transition concordance values of 33.3% (13/39) for identical [monozygotic (MZ)] male pairs and 22.9% (8/35) for MZ female pairs. By contrast, transition concordance values for fraternal (dizygotic; DZ) male and female twins were zero or approached zero (1/36), consistent with genetic influence.² Here, we report the first case of transsexualism in both reared apart brothers of a male-to-female MZ twin pair. One twin (AT) committed suicide at age 35 years; therefore, interviews were conducted in 2012–2013 with the surviving co-twin (LT) at age 50 years. Prior to AT's death, DNA testing had confirmed the twins' monozygosity, as did a twin-typing questionnaire administered to LT.³ Figure 1 shows the twins as young children.

The twins were delivered vaginally on April 28, 1962, to a 40-year-old multiparous Australian mother. When she was diagnosed with facial cancer, hospital staff reasoned that caring for two newborns following surgery would be difficult, and recommended that one be adopted. AT entered a state-run facility prior to his adoption, whereas LT was placed in temporary infant care during his mother's recovery. LT was a sickly infant, undergoing surgery for hypospadias at the age of 6 weeks. The twins' father, age 40 years, had been away from home and told that his wife had delivered one son; he never learned otherwise. LT's family was financially comfortable and middle class in socioeconomic status. Religion played a minor role in his upbringing, and his mother and sisters supported his female identity as it developed and afterward. AT was adopted by an unrelated, lower socioeconomic status family nearby. When the twins were 5 years of age, AT's family moved, separating the twins by 200 miles. AT's parents were religious, punitive, and rejecting of his cross-gendered behaviors.

LT learned that he had a twin at the age of 15 when his mother revealed this secret information inadvertently. When the twins were 15.5 years of age, LT's mother arranged a reunion. Prior to meeting, by age 8 years both twins experienced gender discomfort, engaged in cross-dressing, and felt that they should have been born as the other gender. Also prior to meeting, both twins experienced unease with the anticipated and actual secondary sexual development of puberty. Furthermore, unbeknownst to his twin, at age 14 years LT was fully committed to undergoing sex reassignment surgery and so convinced his mother that she took him to see a urologist. Thus, both twins met the diagnostic criteria of the *fifth edition of the Diagnostic and Statistical Manual (DSM-5)* for gender dysphoria, in particular persistent cross-gender identification and a strong desire to change the sexual characteristics to those of the other gender.⁴

Genetic effects on transsexuality are strongly indicated by this unique case study. The nature and extent of family support also



Figure 1 The portraits of twins, LT and AT, as young children reared apart. These photos were provided by LT on December 20, 2012 with permission to publish them. The deceased twin, AT, passed away in 1997 at the age of 35 years.

affect the behavioral adjustment of transsexual individuals,⁵ as evidenced by LT's more favorable outcome and AT's tragic outcome.

References

- Heylens G, De Cuyper G, Zucker K, Schelfaut C, Elaut E, Vanden Bossche H, De Baere E, et al. Gender identity disorder in twins: a review of the case report literature. *J Sex Med* 2012;9:751–7.
- Diamond M. Transsexuality among twins: identity concordance, transition, rearing and orientation. *Int J Trans* 2013;14:24–38.
- Nichols RC, Bilbro Jr WC. The diagnosis of twin zygosity. *Acta Genet Stat Med* 1966;16:265–75.
- American Psychiatric Association. *Fifth edition of the diagnostic and statistical manual (DSM-5)*. Arlington, Virginia, USA: American Psychiatric Association; 2013.
- Riley EA, Sitharthan G, Clemson L, Diamond M. The needs of gender-variant children and their parents according to health professionals. *Int J Trans* 2011;13:54–63.

Nancy L. Segal*

Department of Psychology, Twin Studies Center,
California State University, Fullerton, Fullerton, CA, USA

Milton Diamond

Pacific Center for Sex and Society, John A. Burns School of Medicine,
University of Hawaii, Honolulu, HI, USA

* Corresponding author. Nancy L. Segal, 800 North State College Boulevard, Fullerton, CA 92834, USA.
E-mail: N.L. Segal <nsegal@fullerton.edu>.

Jan 28, 2014

Available online 20 March 2014

Conflicts of interest: All authors declare no conflicts of interest.